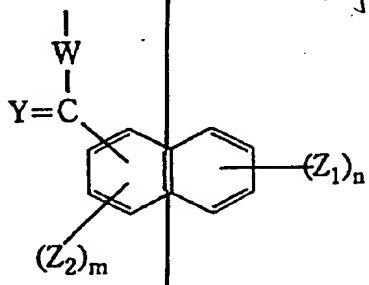
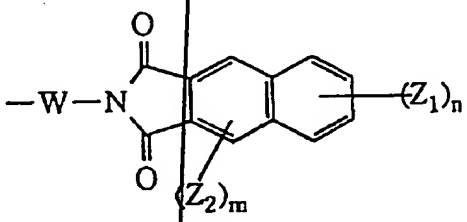
WHAT IS CLAIMED IS:

1. A composition for a bottom anti-reflective coating material, comprising a polymer compound having a structure represented by the following formula (I) or (II) on the side chain:



(I)

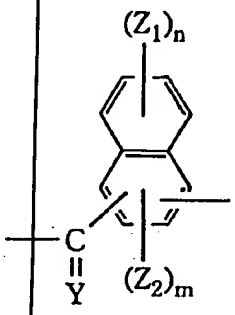


(II)

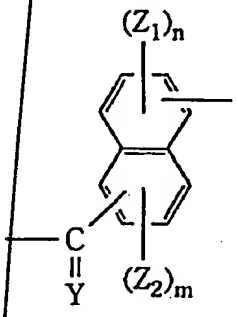
wherein W represents a linking group to the polymer main chain, Y represents an oxygen atom, a sulfur atom or =N-V, Z_1 and Z_2, which may be the same or different, each represents an electron donating group, m and n represent an integer of from 0 to 2 and from 0 to 3, respectively, and when m and n each is 2 or 3, the Z_1 groups or the Z_2 groups may be the same or different, and V represents -OH, $-NH_2$, a linear, branched or cyclic alkyl group having from 1 to 20 carbon

atoms where the alkyl group may have a substituent, an aromatic or heteroaromatic ring group having from 5 to 14 carbon atoms, which may have a substituent, or an alkoxy group having from 1 to 20 carbon atoms.

2. A composition for a bottom anti-reflective coating material, comprising a polymer compound having a structure represented by the following formula (III) or (IV) as a part of the repeating unit on the main or side chain:



(III)

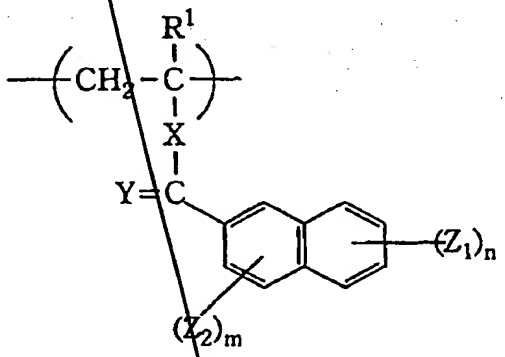


(IV)

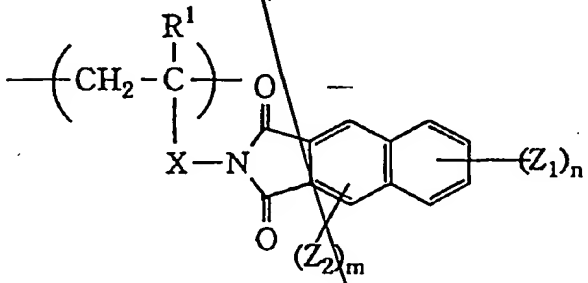
wherein Y represents an oxygen atom, a sulfur atom or =N-V, Z_1 and Z_2, which may be the same or different, each represents an electron donating group, m and n represent an

integer of from 0 to 2 and from 0 to 3, respectively, and when m and n each is 2 or 3, the Z_1 groups or the Z_2 groups may be the same or different, and V represents -OH, $-NH_2$, a linear, branched or cyclic alkyl group having from 1 to 20 carbon atoms wherein the alkyl group may have a substituent, an aromatic or heteroaromatic ring group having from 5 to 14 carbon atoms, which may have a substituent, or an alkoxy group having from 1 to 20 carbon atoms.

3. A composition for a bottom anti-reflective coating material, comprising a polymer compound having a repeating unit of the structure represented by formula (V) or (VI):



(V)



(VI)

wherein R^1 represents a hydrogen atom, a methyl group, a chlorine atom, a bromine atom or a cyano group, X represents a divalent linking group, Y, Z_1, Z_2, m and n have the same meanings as defined in claim 1, and when m and n each is 2 or 3, the Z_1 groups or the Z_2 groups may be the same or different.

4. A composition for a bottom anti-reflective coating material as claimed in claim 3, wherein in formula (V) or (VI), Z_1 and Z_2 each is a group selected from -OH, -OR^4, -NR^5R^6 and -SR^4 wherein R^4 represents a hydrocarbon group having from 1 to 20 carbon atoms, and R^5 and R^6, which may be the same or different, each represents a hydrogen atom or a hydrocarbon group having from 1 to 20 carbon atoms.

5. A composition for a bottom anti-reflective coating material, comprising the following components (a) and (b):

(a) a polymer compound having a structure represented by formula (I) or (II) described in claim 1; and

(b) a melamine, guanamine, glycoluril or urea compound substituted by at least one substituent selected from a methylol group, an alkoxymethyl group and an acyloxymethyl group.

6. A composition for a bottom anti-reflective coating material as claimed in claim 5, wherein in formula (I) or (II), W is a single bond or a linking group containing

a group selected from an alkylene group which may have a substituent, an arylene group which may have a substituent and an aralkylene group which may have a substituent wherein W may have one or more of $-CO_2-$, -CONH-, -O-, -CO- and $-SO_2-$ in the middle thereof, and Z_1 and Z_2 each is a group selected from -OH, $-OR^4$, $-SR^4$ and $-NR^5R^6$ wherein R^4 represents a hydrocarbon group having from 1 to 20 carbon atoms, and R^5 and R^6, which may be the same or different, each represents a hydrogen atom or a hydrocarbon group having from 1 to 20 carbon atoms, and when m and n each is 2 or 3, the Z_1 groups or the Z_2 groups may be the same or different.

7. A composition for a bottom anti-reflective coating material comprising the following components (a) and (c):

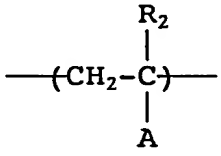
(a) a polymer compound having a structure represented by formula (I) or (II) described in claim 1; and

(c) a phenol, naphthol or hydroxyanthracene compound substituted by two or more groups selected from a methylol group, an alkoxymethyl group and an acyloxymethyl group.

8. A composition for a bottom anti-reflective coating material as claimed in claim 7, wherein in formula (I) or (II), W is a single bond or a linking group containing a group selected from an alkylene group which may have a substituent, an arylene group which may have a substituent

and an aralkylene group which may have a substituent wherein W may have one or more of $-CO_2-$, -CONH-, -O-, -CO- and $-SO_2-$ in the middle thereof, and Z_1 and Z_2 each is a group selected from -OH, $-OR^4$, $-SR^4$ and $-NR^5R^6$ wherein R^4 represents a hydrocarbon group having from 1 to 20 carbon atoms, and R^5 and R^6, which may be the same or different, each represents a hydrogen atom or a hydrocarbon group having from 1 to 20 carbon atoms, and when m and n each is 2 or 3, the Z_1 groups or the Z_2 groups may be the same or different.

9. A composition for a bottom anti-reflective coating material as claimed in claim 1, wherein the polymer compound having a structure represented by formula (I) or (II) contains from 2 to 50 wt% of a repeating structural unit represented by the following formula (VII):



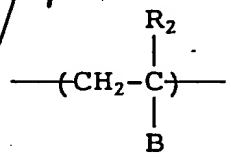
(VII)

wherein R^2 represents a hydrogen atom, a methyl group, a chlorine atom, a bromine atom or a cyano group, and A represents an organic functional group having a $-CH_2OH$, $-CH_2OR^4$ or $-CH_2OCOCH_3$ terminal group wherein R^4 represents a hydrocarbon group having from 1 to 20 carbon atoms.

10. A composition for a bottom anti-reflective coating material as claimed in claim 9, wherein A in formula (VII) is a group resulting from the reaction of $-CONHCH_2OH$,

$-CONHCH_2OCH_3$, $-C_6H_4CH_2OH$, $-C_6H_4CH_2OCH_3$ or $-CONHC(CH_3)_2CHCOCH_3$ with formalin.

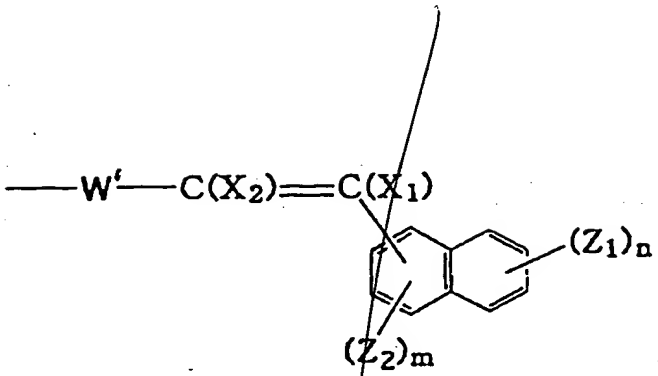
11. A composition for a bottom anti-reflective coating material as claimed in claim 1, wherein the polymer compound having a structure represented by formula (I) or (II) contains from 2 to 30 wt% of a repeating structural unit represented by the following formula (VIII):



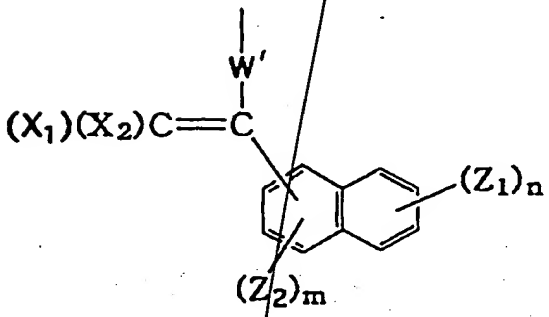
(VIII)

wherein R^2 has the same meaning as R^2 in claim 9, and B represents an organic functional group having an epoxy terminal group.

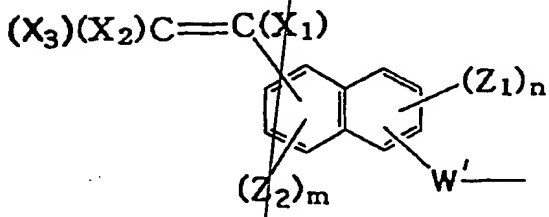
12. A bottom anti-reflective coating material composition comprising a polymer light absorbent having at least one group represented by the following formula (IX), (X), (XI), (XII), (XIII), (XIV) or (XV) on the side chain:



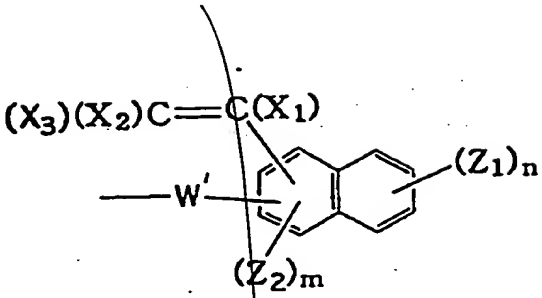
(IX)



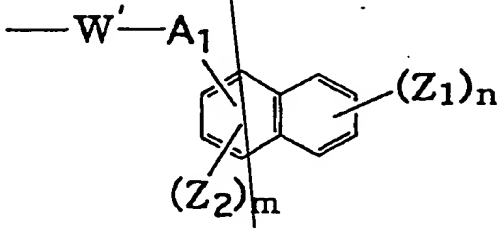
(X)



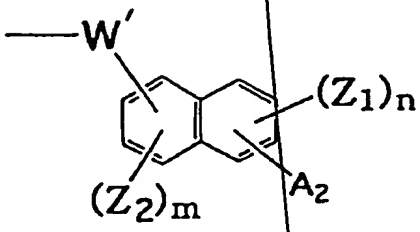
(XI)



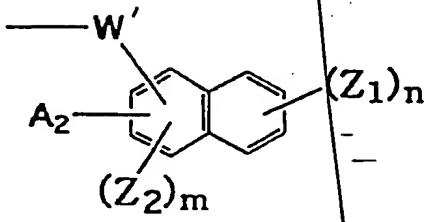
(XII)



(XIII)



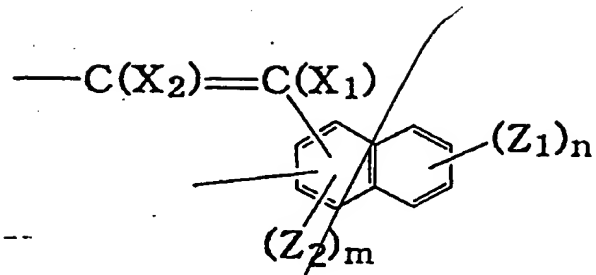
(VXIV)



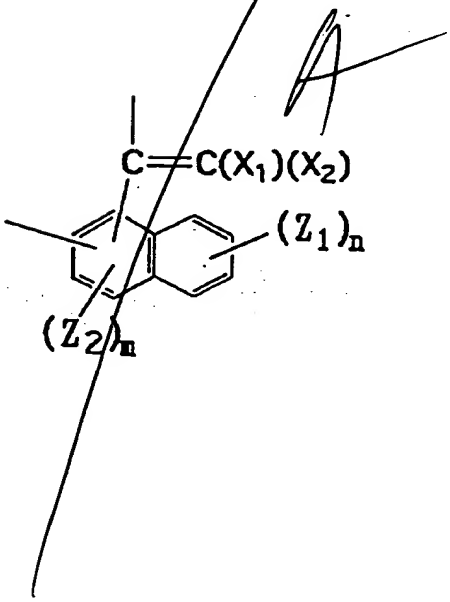
(XV)

wherein W' represents a divalent linking group, X_1 to X_3, which may be the same or different, each represents a hydrogen atom, a halogen atom, a cyano group or $-(X_4)_p-R$ wherein R represents an alkyl group having from 1 to 20 carbon atoms, an aryl group having from 6 to 20 carbon toms or an aralkyl group having from 7 to 20 carbon atoms, which may have a substituent, X_4 represents a single bond, $-CO_2-$, -CONH-, -O-, -CO-, an alkylene group having from 2 to 4 carbon atoms or $-SO_2-$, p represents an integer of from 1 to 10, Z_1 and Z_2, which may be the same or different, each represents an electron donating group, m and n represent an integer of from 0 to 2 and from 0 to 3, respectively, and when m is 2 or m and n each is 2 or 3, the Z_1 groups or the Z_2 groups may be the same or different, A_1 represents a divalent aromatic ring or heteroaromatic ring group having from 5 to 14 carbon atoms, which may have a substituent, and A_2 represents an aromatic ring or heteroaromatic ring group having from 5 to 14 carbon atoms, which may have a substituent.

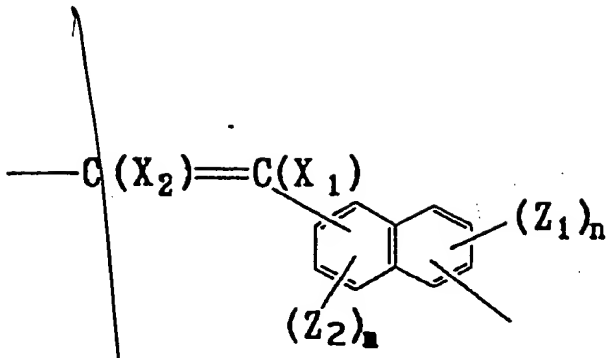
13. A bottom anti-reflective coating material composition comprising a polymer light absorbent having at least one structure represented by the following formula (XVI), (XVII), (XVIII), (XIX), (XX), (XXI), (XXII) or (XXIII) as at least a part of the repeating unit on the main or side chain:



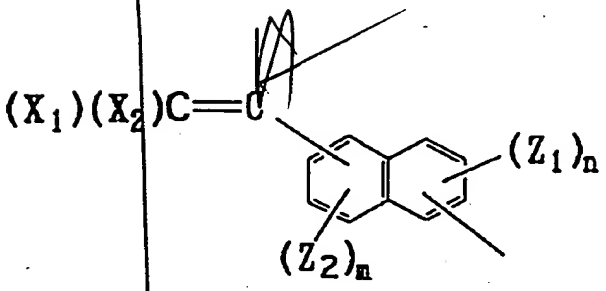
(XVI)



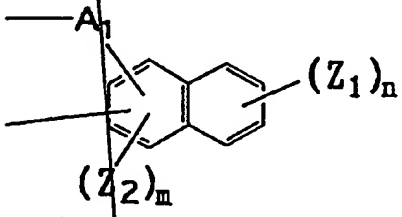
(XVII)



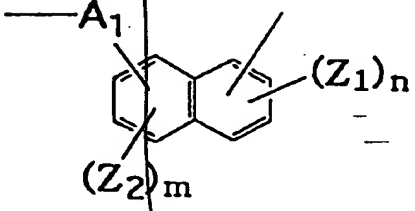
(XVIII)



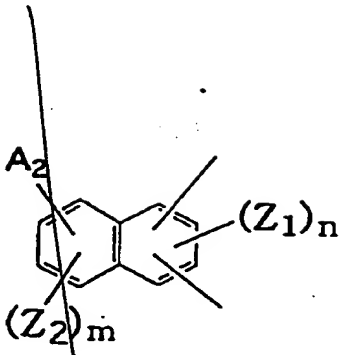
(XIX)



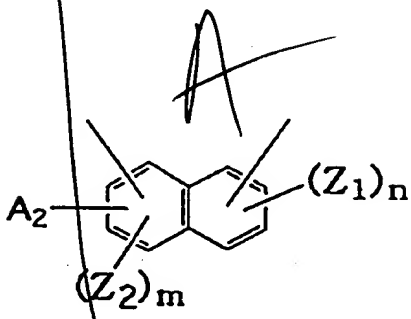
(XX)



(XXI)



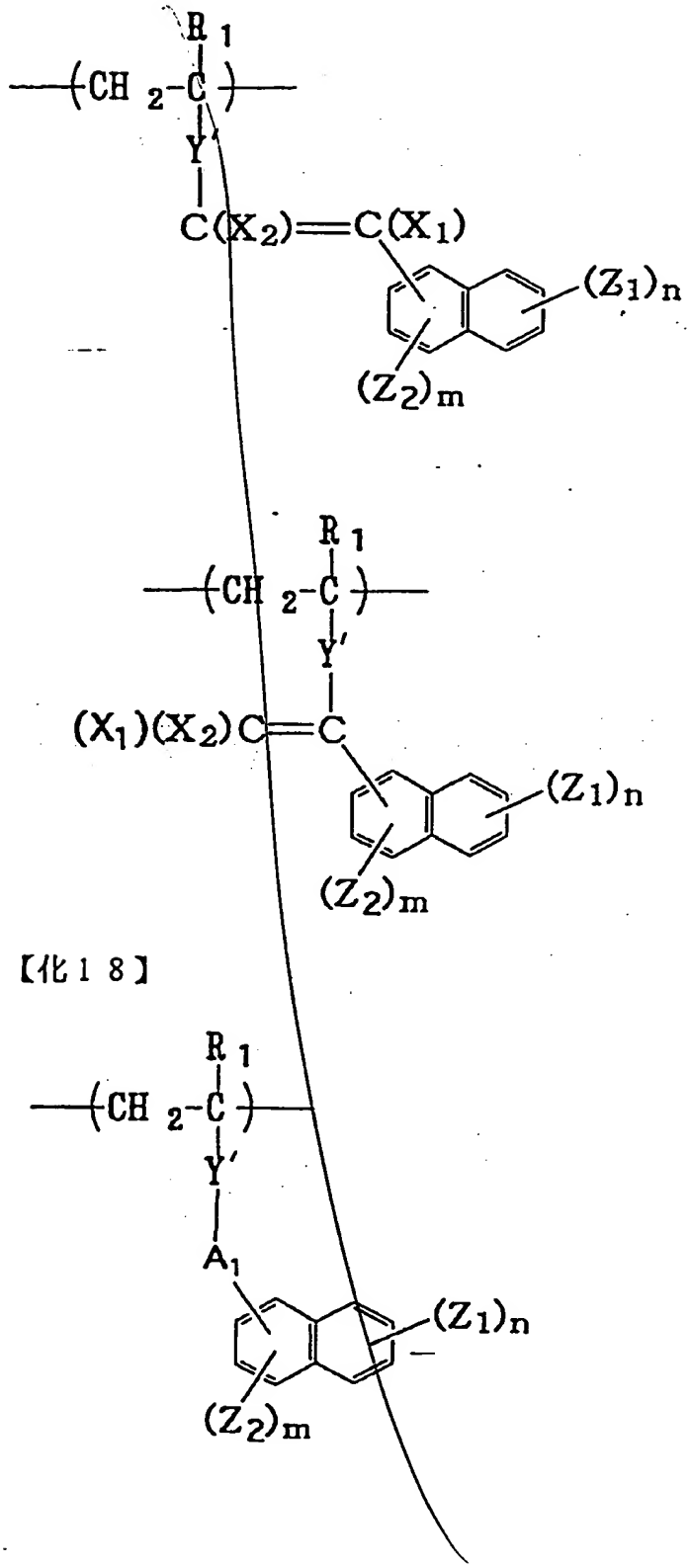
(XXII)



(XXIII)

wherein X_1 to X_3, Z_1, Z_2, A_1, A_2, n and m each has the same meaning as defined in claim 12.

14. A bottom anti-reflective coating material composition comprising a polymer light absorbent having at least one repeating structural unit represented by the following formula (XXIV), (XXV) or (XXVI):



(XXIV)

(XXV)

【化18】

(XXVI)

wherein R^1 represents a hydrogen atom, a methyl group, a chlorine atom, a bromine atom or a cyano group, Y' represents a divalent linking group, X_1, X_2, Z_1, Z_2, m, n and A_1 each has the same meaning as in claim 12.

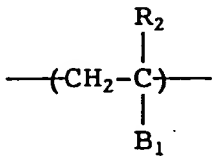
15. A bottom anti-reflective coating material composition as claimed in claim 14, wherein Y' is a single bond, an alkylene, arylene or aralkylene group which may partially have one or more of $-CO_2-$, -CONH-, -O-, -CO- and $-SO_2-$, or a group represented by $-CO_2-E-$, -CONH-E-, -O-E-, -CO-E- or $-SO_2-E-$ group wherein E represents a single bond or an aromatic ring group having from 6 to 14 carbon atoms, which may have a substituent.

16. A bottom anti-reflective coating material composition as claimed in claim 12, wherein Z_1 and Z_2, which may be the same or different, each represents -OH, $-OR^4$, $-NR^5R^6$ or $-SR^4$ wherein R^4 represents a hydrocarbon group having from 1 to 20 carbon atoms, and R^5 and R^6 each represents a hydrogen atom or a hydrocarbon group having from 1 to 20 carbon atoms.

17. A bottom anti-reflective coating material composition as claimed in claim 12, wherein A_1 and A_2 each represents a divalent or monovalent group of benzene, naphthalene, anthracene, phenanthrene or thiophene ring, which may have a substituent.

18. A bottom anti-reflective coating material

composition as claimed in claim 12, wherein said polymer light absorbent contains from 2 to 50 wt% of the repeating structural unit represented by the following formula (XXVII):

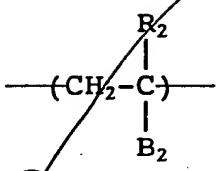


(XXVII)

wherein R^2 represents a hydrogen atom, a methyl group, a chlorine atom, a bromine atom or a cyano group, and B_1 represents an organic functional group having $-CH_2OH$, $-CH_2OR^7$ or $-CH_2OCOCH_3$ at the terminal wherein R^7 represents a hydrocarbon group having from 1 to 20 carbon atoms.

19. A bottom anti-reflective coating material composition as claimed in claim 12, wherein said polymer light absorbent contains from 2 to 50 wt% of a repeating structural unit represented by formula (XIX) of claim 18 where B_1 is a group obtained by the reaction of a group represented by $-CONHCH_2OH$, $-CONHCH_2OCH_3$, $-CH_2OCOCH_3$, $-C_6H_4(OH)CH_2OH$, $-C_6H_4(OH)CH_2OCH_3$ or $-CONHC(CH_3)_2CH_2COCH_3$, with formalin.

20. A bottom anti-reflective coating material composition as claimed in claim 12, wherein said polymer light absorbent contains from 2 to 30 wt% of a repeating structural unit represented by the following formula (XXVIII):



(XXVIII)

wherein R^2 represents a hydrogen atom, a methyl group, a chlorine atom, a bromine atom or a cyano group, and B_2 represents an organic functional group having an epoxy terminal group.

21. A bottom anti-reflective coating material composition comprising the following components (a) and (b):

(a) a polymer light absorbent claimed in claim 12; and

(b) a melamine, guanamine, glycoluril or urea compound substituted by at least one substituent selected from a methylol group, an alkoxymethyl group and an acyloxymethyl group.

22. A bottom anti-reflective coating material composition comprising the following components (a) and (c):

(a) a polymer light absorbent claimed in claim 12; and

(c) a phenol, naphthol or hydroxyanthracene compound substituted by at least one substituent selected from a methylol group, an alkoxymethyl group and an acyloxymethyl group.

23. A method for forming a resist pattern, which uses a bottom anti-reflective coating material composition

claimed in claim 1.

24. A method for forming a resist pattern, which uses a bottom anti-reflective coating material composition claimed in claim 12.